

STATE OF SOUTH CAROLINA)
)
COUNTY OF SPARTANBURG)

AFFIDAVIT OF DR. BRIAN G. MORIN

I, Brian G. Morin, after being first duly sworn on oath, depose and say that:

I am an inventor of the invention disclosed and claimed in the patent application entitled "Textile Fabric With Particle Attracting Finish", Serial No. 09/178,396, filed October 23, 1998.

My education background is a B.S. degree in Physics from the University of North Carolina at Chapel Hill in 1989. I received a M.S. degree in Physics at the Ohio State University in 1992 and completed a Ph.D. in Physics at the Ohio State University in 1994.

From 1994 to 1995, I was employed at Spectro Dynamic Systems, where I worked developing radar absorbing paint for stealth aircraft. In 1995, I joined Milliken Research Corporation where I have been conducting research and developing applications in the field of changing polymer morphology, including clean room wipers, high tenacity fibers, and fibers with unique electrical properties.

In response to the U.S.P.T.O. action dated April 24, 2000, I was asked to develop a comparative example based on the disclosure in Yahiaoui et al., U.S. Patent No. 5,814,567.

Comparative Testing

Yahiaoui et al. disclose coating textile webs with a hydrophilic polymeric material. Illustrative compositions are nonwoven, polypropylene substrates coated with a modified polysaccharide. Accordingly, the following materials were selected for testing.

Fabric Substrate

Fabric A was a needlepunched, nonwoven, polypropylene fabric. The fabric had a weight of 4 ounces per square yard. The polypropylene fiber was approximately 8 denier per filament.

Fabric B was a spunbond, nonwoven, polypropylene fabric. The fabric had a weight of 2.3 ounces per square yard. The fabric had been calandered and was flat and stiff.

Hydrophilic Polymer Coating

Hydroxyethylcellulose: Aqualon Natrosol 99-250 LR.

Methylcellulose: Dow Methocel A4M

Hydroxypropylmethylcellulose: Dow Methocel K15M

The fabrics were immersed in a 0.25 wt.% aqueous solution of the hydrophilic polymer, removed and squeezed to remove the excess liquid. The fabrics were dried in an oven at 60°C for one-half hour. The add on of hydrophilic polymer coating was approximately 0.25 wt.% and 0.1 wt.% based on the weight of the uncoated fabric, for Fabrics A and B, respectively.

Testing

Each of the coated fabrics was tested for (a) particle count of particles greater than 0.5 microns, and (b) particle count of particles greater than 5 microns, according to Biaxial Shake Test IEST-RP-CP-CC004.2. The results are set forth below in Table 1.